

REMARKS

In the final office action dated November 26, 2003, the Examiner rejected claims 38 – 52. Applicants are amending claim 38. Claims 38 – 52 remain pending.

Rejections Under 35 U.S.C. §102 (b)

In sections 2 and 3 of the Office Action, the Examiner rejected claims 38, 42 – 44, and 46 – 52 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,043,903 to Constant (hereinafter *Constant*).

Applicants submit that claim 38 is patentable over *Constant* by at least reciting:

A system for collision avoidance in formation flight, the system on a lead ~~first~~ aircraft, the system comprising:

- a. data link transponder means for passively receiving broadcast data from a second aircraft, the broadcast data comprising indicia of position of the second aircraft;
- b. navigation means for providing indicia of current position of the lead ~~first~~ aircraft;
- c. means for determining relative aircraft position of the lead ~~first~~ and second aircraft in accordance with the indicia of position of the second aircraft and the indicia of the current position of the lead ~~first~~ aircraft;
- d. means for generating a steering command to maintain separation between the lead ~~first~~ aircraft and the second aircraft in accordance with relative aircraft position of the lead ~~first~~ and second aircraft; and
- e. means for transmitting the steering command to the second aircraft.

Support for the amendments to claim 38 are found at least in paragraphs 17 and 40 of the substitute specification dated February 11, 2002.

In contrast, *Constant* teaches that H1, a lead helicopter, transmits to H0, a lead helicopter of another formation or a ground station. H0 then transmits back to the lead helicopter H1. Further, H1 then initially transmits sequentially to the other helicopters in formation, which then transmit back to H1. (See Figure 7 and text beginning at the top of column 6). On the other hand, claim 38 recites that the lead helicopter passively receives broadcast data from a second helicopter, i.e., the lead helicopter does not need to transmit data first to a second helicopter in order to receive a transmission back from the second helicopter as *Constant* teaches. The reduced transmission requirements of the claimed invention, as compared to *Constant*,

significantly reduce the range upon which the formation can be detected and also reduces RF interference, thereby enabling maintaining uninterrupted position and separation updates.

Accordingly, Applicants submit that claim 38 is patentable over *Constant* and request withdrawal of this rejection. Further, as claims 42 – 44 and 46 – 52 depend through to claim 38, withdrawal of this rejection with respect to these claims is also requested.

In sections 4 and 5 of the Office Action, the Examiner rejected claims 38, 42 – 44, 46, and 48 under 35 U.S.C. § 102 (b) as being anticipated by “Using GPS for Airborne Formation Control” by Mark D. Goodwin et al. (hereinafter *Goodwin*).

Applicants submit that, like *Constant*, *Goodwin* does not disclose the passive receipt of broadcast data. Specifically, *Goodwin* discloses that the lead aircraft sends its position information to following aircraft, which transmit their relative position to all other aircraft in formation. In other words, *Goodwin* teaches that the lead aircraft must first transmit data to the other aircraft before it will receive positioning data from them. (See the first paragraph on page 874). In contrast, as mentioned above, claim 38 recites the passive receipt of broadcast data, i.e., there is no need to first transmit to the other aircraft in order to receive data from them.

Accordingly, Applicants submit that claim 38 is patentable over *Goodwin* and request withdrawal of this rejection. Further, as claims 42 – 44, 46, and 48 depend through to claim 38, withdrawal of the rejection with respect to these claims is also requested.

Rejections Under 35 U.S.C. § 103(a)

In sections 6 and 7 of the Office Action, the Examiner rejected claims 39 – 41, 45 and 49 under 35 U.S.C. §103(a) as being unpatentable over *Constant* in view of either “ADS-Mode S System Overview” to Robert E. Boisvert (hereinafter *Boisvert*) or U.S. Patent No. 5,570,095 to Drouilhet, Jr. et al (hereinafter *Drouilhet*). Applicants submit that, as discussed above, *Constant* does not teach the passive receipt of signals from a second aircraft. Therefore, the combination of *Constant* with either *Boisvert* or *Drouilhet* cannot possibly yield or suggest the claimed invention. Further, as claims 39 – 41, 45, and 49 depend through to claim 38, they should be patentable over the cited references for at least the same reasons that claim 38 is patentable.

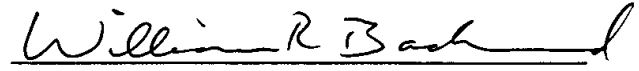
Conclusion

Reconsideration is respectfully requested. Applicants believe the case is in condition for allowance and respectfully requests withdrawal of the rejections and allowance of the pending claims.

The Examiner is invited to telephone the undersigned at the telephone number listed below if it would in any way advance prosecution of this case.

Respectfully submitted,

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